

## REMARKS

In an Office Action dated June 15, 2009, claims 1-8, 15, and 16 of the present application were rejected. Herein, claims 1 and 5 are currently amended. No new matter has been added. Further examination and reconsideration of the application are respectfully requested.

Claims 1-8 and 15-16 were rejected under 35 U.S.C. 103(a) as being unpatentable over EP 1101524 (hereafter "EP '524") in view of Arno (U.S. Patent No. 6,905,663), and optionally further in view of Paules (U.S. Patent No. 4,015,546). Applicants respectfully request reconsideration of the rejection based on the remarks below.

Claim 1 recites, in part, heating an exhaust gas in the presence of O<sub>2</sub> without adding H<sub>2</sub>O and/or H<sub>2</sub> to the exhaust gas. This feature of claim 1 is not disclosed or suggested in EP '524, Arno, or Paules.

EP '524 discloses treatment of waste gas by introducing the waste gas into a thermal decomposing means such that the waste gas is decompressed through contact with  $\gamma$ -alumina heated at 500-1000°C (EP '524 [0017]). Additionally during the thermal decomposition, H<sub>2</sub> and/or H<sub>2</sub>O and O<sub>2</sub> are added to the waste gas as decomposition assist gases such that the components of the waste gas are decomposed into acidic gases and CO<sub>2</sub> (EP '524 [0017]). Specifically, for perfluorocarbons ("PFCs"), H<sub>2</sub> or H<sub>2</sub>O is added in moles at least equal to the moles necessary for the F atoms in the PFC to be converted into HF, and O<sub>2</sub> is added in moles at least equal to the moles necessary for the C atoms in the PFC to be converted into CO<sub>2</sub> (EP '524 [0019]). In view of the foregoing, Applicants respectfully submit that EP '524 fails to disclose or suggest heating an exhaust gas in the presence of O<sub>2</sub> **without adding** H<sub>2</sub>O and/or H<sub>2</sub> to the exhaust gas because EP '524 teaches adding either or both of H<sub>2</sub> and H<sub>2</sub>O during the thermal decomposition.

Arno is relied upon as disclosing adding H<sub>2</sub>O or H<sub>2</sub> to exhaust gas to decompose or oxidize fluorine compound after heating the exhaust gas. Applicants respectfully submit that the

Arno reference does not provide disclosure that would obviate the above mentioned deficiencies of EP '524.

Paules is relied upon in the rejection of claims 15 and 16 as disclosing that it is known in the art to use baffles in a heating zone to increase the flow path of gas to be heated to facilitate heat transfer. Applicants respectfully submit that the Paules reference does not provide disclosure that would obviate the above mentioned deficiencies of EP '524.

Accordingly, no obvious combination of EP '524 with Arno or Paules would include the feature recited in claim 1 of heating an exhaust gas in the presence of O<sub>2</sub> without adding H<sub>2</sub>O and/or H<sub>2</sub> to the exhaust gas.

Based on the above remarks, Applicants respectfully submit that claim 1 is patentable over any combination of EP '524, Arno, or Paules.

Further, dependent claims 2-4 and 15 are patentable over any combination of EP '524, Arno, and Paules based at least on their dependency from allowable claim 1.

Regarding claim 5, Applicants note that claim 5 recites, in part, heating an exhaust gas in the presence of O<sub>2</sub> without adding H<sub>2</sub>O and H<sub>2</sub> to the exhaust gas. For at least similar reasons as discussed above with respect to claim 1, Applicants respectfully submit that claim 5 is patentable over any combination of EP '524, Arno, or Paules.

Further, dependent claims 5-8 and 16 are patentable over any combination of EP '524, Arno, and Paules based at least on their dependency from allowable claim 5.

Therefore, for at least the reasons presented above, Applicants respectfully submit that independent claims 1 and 5, as well as the claims depending therefrom, are clearly allowable over the prior art of record.

In view of the foregoing amendments and remarks, Applicants respectfully submit that the present application is clearly in condition for allowance. An early notice thereof is earnestly solicited.

If, after reviewing this Amendment, the Examiner feels there are any issues remaining which must be resolved before the application can be passed to issue, Applicants respectfully request that the Examiner contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

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